

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An air quality system for removing a pollutant from an air stream, and for providing cleansed air to an interior air space, said air quality system comprising:
at least one air cleaner unit in communication with said interior air space;
wherein said at least one air cleaner unit provides only a single flow path for said air stream;
wherein said at least one air cleaner unit comprises:
at least one photocatalytic oxidation unit[[s]]; and
first and second discrete adsorbent units;
wherein said first adsorbent unit includes a first adsorbent material having a first isotherm curve for said pollutant, said first adsorbent unit being in flow communication with said interior air space having said pollutant,
wherein said second adsorbent unit includes a second adsorbent material having a second isotherm curve for said pollutant,
wherein said second isotherm curve is steeper than said first isotherm curve;
wherein said at least one photocatalytic oxidation unit is spaced from and located downstream from said first adsorbent unit and spaced from and located upstream from the second adsorbent unit;
wherein said first adsorbent unit is adapted to reversibly adsorb said pollutant from said air stream at a first concentration of said pollutant;

wherein said first adsorbent unit is further adapted to desorb said pollutant into said air stream at a second concentration of said pollutant; and

wherein said second adsorbent unit is adapted to adsorb said pollutant from said air stream at the second concentration of the pollutant.

2-8. (Canceled)

9. (Previously Presented) The air quality system of claim 1, wherein said at least one photocatalytic oxidation unit comprises at least one photocatalytic panel, wherein said photocatalytic panel comprises a photocatalytic support, and wherein said photocatalytic panel comprises expanded aluminum.

10. (Original) The air quality system of claim 1, wherein:
said first adsorbent unit includes a first adsorbent material, said first adsorbent material having micropores in the range of from about 5 to 10 Å in diameter.

11. (Original) The air quality system of claim 10, wherein:
at least about 30% of said micropores have a diameter in the range of from about 5 to 10 Å.

12. (Original) The air quality system of claim 10, wherein:
said first adsorbent material comprises an activated carbon fabric.

13. (Original) The air quality system of claim 1, wherein said interior air space is within an aircraft.

14-16. (Canceled)

17. (Previously Presented) The air quality system of claim 1, further comprising a particulate filter upstream from said at least one photocatalytic oxidation unit and said first adsorbent unit.

18. (Original) The air quality system of claim 1, wherein said at least one air cleaner unit is adapted for operation at a constant temperature.

19. (Original) The air quality system of claim 1, wherein said at least one air cleaner unit is adapted for operation at ambient temperature.

20-64. (Canceled)

65. (Previously Presented) The air quality system of claim 1, wherein:

said at least one photocatalytic oxidation unit comprises a plurality of photocatalytic panels and a plurality of UV sources, and

said plurality of photocatalytic panels and said plurality of UV sources are arranged linearly and parallel to each other, with each of said plurality of UV sources alternating with each of said plurality of photocatalytic panels.

66. (Canceled)